

# Assessing employee-owned firms: an examination of the Spanish economic model

Josefina Fernández-Guadagno and Manuel López-Millán

Accounting and Finance Department, Complutense University, Madrid, Spain

## ABSTRACT

Employee-owned firms (EOFs) form part of the so-called social economy, and they are seen as an alternative business model that aims to establish itself as a third way, different to conventional capitalist firms and public enterprises. These firms meet the Spanish legal requirements (Law 44/2015) for employee ownership designation. This paper assesses whether the capital ownership structure is a key factor determining operating performance, productivity and solvency, or in other words, the impact the firm's capital ownership structure may have on its economic performance, labour factor and capital factor. Based on a sample of small employee-owned firms and non-employee owned firms, the study develops an empirical methodology using a panel data analysis. The study shows the characteristics of Spain's EOFs as an alternative legal form of employee share ownership, which is included in the Social Economy, but different from cooperative societies.

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## 1. Introduction

Employee share ownership is clearly gaining momentum. Indeed, the economic crisis has increased interest in promoting these employee-owned businesses as a way of striving for economic democracy and as an alternative to capitalist enterprise, one that looks to find a balance between labour and capital, to improve economic performance or sectors of the economy, wage flexibility and wage moderation (Poutsma, Nijs & Poole, 2003).

Employee share ownership takes different forms such as employee share ownership plans, a typical form that is popular in the U.S.A. although not used much in Europe. Employee share ownership (ESO) can also be carried out using a savings plan with contributions from the employee and/or employer, as is most common in the U.K and Ireland. Further variants include producer co-operatives, in which all the firm's shares are collectively owned by its workforce, or employee buy-outs (EBOs), under which the company's shares are purchased exclusively by its individual employees (Poutsma, Nijs & Poole, 2003).

Spain has created an alternative legal form of employee share ownership (Law 44/2015), which is different to cooperative societies and is included in the Law on

Social Economy (Law 5/2011). In this paper are analysed firms that meet the Spanish legal requirements for employee ownership designation. According to the regulation the main characteristic is that more than 51% is owned by its employees. This model, unique in the European Union (Lejarriaga, 2002), gives us the opportunity to compare it with the conventional capitalist firm.

Financial participation from employees appears to be of particular interest in terms of public policy for many countries who consider it as a way to improve their business performance and therefore their competitiveness (Kato & Morishima, 2003). In the European Union, growing interest in encouraging employee access to the ownership of the firms in which they work is motivated by extensive evidence on potential benefits to employees and firms involved in such participation (European Commission, 2002), as can be seen from the various reports, recommendations and resolutions dealing with this issue; European policies on this issue are summarised in the four PEPPER reports (Promotion of Employee Participation in Profits and Enterprise Results).

However, there is still no established European definition of an employee-owned firm, making it difficult to create a homogeneous regulatory framework and establish and manage financial support (Fernández-Guadaño, 2014).

For all these reasons, this paper analyses the extent to which differences in operating performance, productivity and solvency between employee-owned firms (EOFs) and non-EOFs can be attributed to their different capital-ownership structures in order to help strengthen the EOF model.

In Spain, EOFs are part of the Social Economy business model that must show it is capable of consolidating its position as an alternative to conventional capitalist companies, demonstrate its viability, and safeguard its added social value (Fernández-Guadaño, 2015; Ciruela-Lorenzo et al., 2016; Bel Duran et al., 2018; Bel & Lejarriaga, 2018; Chaves & Monzón, 2018). There are two different types of worker-managed firms: cooperative firms and employee-owned firms. In both cases the capital is largely in the hands of the employees, but they are regulated differently. In this paper, to make the comparison as homogeneous as possible, we have considered the last new Labour Limited Liability Companies (Law 44/2015) to be employee-owned firms (EOF) and the Limited Liability Companies (Law 1/2010) to be conventional capitalist firms (Non-EOF).

EOFs are participation firms in which the specific element that provides people with the power to establish the firm's objectives, or in other words, gives them their status as partners, is precisely their participation, as players, promoters or actors, in the production-distribution process of the goods and services. In these companies, people and their interests in the production and distribution process are a higher priority than capital (García-Gutiérrez Fernández, 2002).

According to the Law 44/2015 the primary characteristic of an EOF is that employees with full-time, open-ended contracts with the firm must own the majority of the capital. With a minimum of three partners<sup>1</sup> required to set up such a company, the distribution of capital per partner is also regulated in such a way that no partner can individually own more than one third. Since they have the majority of the share capital, it is the employee-partners who control the company. And, the final

requirement is that the number of hours per year worked by the employees with open-ended contracts who are not partners may not be greater than forty-nine per cent of the total number of hours worked in the EOF by the employee-partners as a whole. These requirements must be fulfilled simultaneously if the firm does not wish to lose its legal status as EOF.

Also, there are legal limits on transferring shares and the difficulties that arise in these companies when it comes to determining their purchase price (Fernández-Guadaño, 2015). To offset this, EOFs have fiscal advantages such as exemptions from certain taxes but none in terms of tax benefit.

EOFs can be compared with Non-EOFs, in which partner status is achieved by providing capital, with the final goal being to make a profit. Financial partnership in this type of company does not imply involvement in other business processes. There may be some employee ownership but without exceeding 50% of the capital. The Spanish legal framework allows for different types of non-EOF (Law 1/2010), such as the public limited company and limited liability company (Fernández-Guadaño & López-Millán, 2018). For the purposes of a more homogeneous study, the focus here is on the second type.

Our interest lies in testing the main hypotheses of traditional economic theory in relation to the impact of the capital ownership structure of the firm on its economic performance, labour factor and capital factor. To analyse the differences in the economic performance two hypotheses are proposed related to the positively influences of employee share ownership on value added and return on assets; in the labour factor the hypothesis establishes related to the productivity variable; and finally, to study the differences attributed to the capital factor, the hypothesis establishes the positively influences of employee share ownership on solvency.

As a result, the article is structured as follows: there is an initial description of the relevant economic literature in this issue, examining the different approaches for and against employee-owned companies; second, the methodology and statistical models are presented; in the penultimate section, the empirical results of testing the hypotheses are shown; the last section sets out the conclusions.

## 2. Literature review

The main differences between the two types of companies are usually attributed to differences in the objective function, which in turn implies differences in the use and exploitation of the labour and capital factors (Fernández-Guadaño, 2015; Melgarejo et al., 2007a). Analysis of these differences has attested to the idea that ESO is good for different dimensions of firm performance (Richter & Schrader, 2017).

Differences in economic performance of the firms are usually attributed to the different capital-ownership structures. The partner-employees in EOFs are, according to Frohlich et al., (1998) “dual stakeholders”, as both owners and workers, therefore, economic performance should be better than in conventional firms because they have more incentives to maximise it. Capitalist partners in non-EOFs receive their dividends for their contributions to capital, which implies an alignment with the profit maximisation objective attributable to the neoclassical approach and the employees

receives payments for the work they do in form of wages (Ireland, 1987, Domar, 1966; Craig & Pencavel, 1993; Vanek, 1970).

However, partner-employees in EOFs, by participating in the real, financial and informational-decisional aspects, may choose to reduce profits, or even do away with these altogether, anticipating them through labour income, thus affecting the economic performance, and, therefore, the return on the capital they provide (Fernández-Guadano, 2015). According to Dow (2018) in a competitive market a suitably designed Labour Managed Firm (LMF) will maximise profit, to ensure this outcome one institutional mechanism is a competitive market for LMF membership rights. Impossible for EOFs with the Spanish regulatory framework. According to Cahill (2000), many studies find a positive relationship between employee share ownership and profitability although, for the most part, this relationship is not statistically significant. To analyse the differences in the economic performance two hypotheses are proposed:

*H1 Employee share ownership positively influences value added.*

*H2 Employee share ownership positively influences return on assets (ROA).*

In a recent study by Lowitzsch et al., (2017), they consider that employee-owned firms are likely to have improved labour relations, lower staff turnover and fewer periods of industrial action. These factors contribute to higher labour productivity. However, other authors argue that due to the perverse effects of opportunistic behaviour, EOFs operate with lower productivity rates for all factors (Alchian & Demsetz, 1972, Williamson, 1975). The comparative productivity of the two types of company is a widely studied variable but with varying results (Bonin, Jones & Putterman, 1993). To analyse the differences related to the performance of the labour factor, the following hypothesis is established:

*H3 Employee share ownership positively influences productivity*

The differences attributed to the capital factor are caused by different aspects of the financial structure that affect long-term solvency (Fernández-Guadano, 2015), and in particular by lack of motivation in EOFs to increase equity either by attracting share capital (Álvarez et al., 2000) or retaining profits (Bonin et al., 1993).

In the case of attracting share capital, problems arise due to two fundamental reasons, first, problems with selling the securities which are subject to a series of legal rules that control their transfer (Law 14/2015, art. 6); second, the difficulties of determining their purchase price due to the limited access to capital markets. The price will be that established by mutual agreement between the parties or, in the absence of this, their fair value. Fair value is understood as that determined by an independent expert, other than the company's auditors, appointed by the directors for this purpose (Law 14/2015, art. 7).

With regard to retaining profits, a number of critics have pointed out that when a company's employees can exercise control over the firm's residuals, they are likely to influence the distribution of profits so that they receive a larger share, leaving a smaller share for the retention of profits and consequently for investment (Lowitzsch et al., 2017). According to Jensen & Meckling (1979) EOFs tend to under-invest

retained earnings because members who plan to leave the firm cannot capitalise on subsequent investment returns. This makes it unattractive for members to sacrifice wages for the sake of internal capital accumulation (the ‘horizon problem’) (Dow, 2001).

The problem of under-investment is frequently addressed by rules specifying a minimum rate of reinvestment out of collective capital (Dow, 2018). This rule is imposed by Law (art. 14) in the Spanish case which also establishes that in addition to the legal reserves and those required by the articles of association, EOFs are obliged to create a special reserve to which ten per cent of the net profit in each financial year must be allocated until it reaches a figure of at least more than twice the share capital.

To study the differences attributed to the capital factor, the following hypothesis is established:

*H4 Employee share ownership positively influences solvency.*

The issue of differences between the two types of firms remains controversial. Perhaps the mixed evidence in the literature review could be due to the diversity of employee-ownership forms or according to Richter & Schrader (2017) the extant empirical research suggests that investigations of the ESO-firm performance relationship are sensitive to the model specification and the use of alternative performance measures. This paper aims to find additional empirical evidence from Spain, the only country in the European Union that has regulated the social economic model represented by the EOF.

### 3. Methodology

To test the four previous hypotheses and analyse the causes behind the differences we encountered, we use a panel data methodology. Specifically, the model used was as follows:  $Q = \beta X_{it} + (\alpha_i + \mu_{it})$ . Where  $Q$  denotes a measure of the firm’s performance, for  $Q$  we consider four measures: Model 1: Value added; Model 2: ROA; Model 3: Productivity and Model 4: Solvency. For  $X_{it}$ , we consider ownership and the control variables size, sector, age and indebtedness.

We estimated our models by using feasible generalised least square robust random effects estimation procedure. This study is interested in the performance differences between EOF and non-EOF that can be attributed to the differences in capital ownership. According to Hsiao (2003) this between-firm variance can be best analysed using a random effects model. If we see our data we can appreciate more variation across individual firms (between-variation) than over time (within-variation). The Hausman test confirms our data inspection la Prob >  $\chi^2$  is greater than .05 and the null hypothesis is rejected because there is no correlation between the individual effects and the explanatory variables and the random model is chosen. The Wald test for heteroskedasticity gave positive results, therefore, feasible generalised least squares (FGLS) regression that controls for heteroscedasticity was necessary for robustness reasons.

**Table 1.** Distribution of sample firms by sector of activity.

Sector	Non-EOF		EOF		Total	
	N	Per cent	N	Per cent	N	Per cent
Secondary	99	25.8	143	41.7	242	33.3
Tertiary	285	74.2	200	58.3	485	66.7
Total	384	100.0	343	100.0	727	100.0

## 4. Empirical data and analysis

### 4.1. Data

To obtain the samples of the two types of company, we selected from the *Orbis* database those Spanish companies active during the 2009–2012 period, omitting those that did not provide financial data in any of the years being studied. On classifying them by size, it was noted that there were no medium or large EOFs in the sample, so the non-EOFs of these sizes were eliminated. Finally, we checked that non-EOFs were not “de facto” EOFs. Therefore, the final sample includes 727 firms consisting of 384 non-EOFs (52.8%) and 343 EOFs (47.2%).

The sample firms have been classified by activity sector (Table 1), size (Table 2) and also on the basis of their age (Table 3). All of them are considered control variables in the statistical study.

The companies in the sample belong to the secondary (industry and construction), and tertiary (services and commerce) sectors in accordance with the National Classification of Economic Activities<sup>2</sup>. There are higher percentages of both types of company in the tertiary sector than the secondary sector. Nevertheless, the sample of EOFs contains more secondary sector firms than that of non-EOFs.

Subsequently, the companies were classified by their average size in terms of number of employees, following European Commission (concerning the definition of micro and small enterprises, Official Journal L 124 of 20.5.2003). The highest percentage of non-EOFs and EOFs fall to micro-companies followed by small firms. The sample of EOFs contains more micro firms than that of non-EOFs.

Lastly, the distribution of the sample in accordance with age (Table 3) shows that almost half of the non-EOFs were created in the decade 1990–2000 and the other half (45.8%) after the year 2000, while 76.1% of the EOFs were created in 2000 or later. This is probably due to government efforts to encourage employee-participation firms, through subsidies and policies such as total capitalisation of unemployment benefit, which has been enhanced over recent years.

### 4.2. Variables

#### 4.2.1. The dependent variables

According to Melgarejo, Arcelus & Simon (2007b) and Fernández-Guadano (2015), the variables used to measure operating performance must include indicators of financial performance, profitability, financial structure, wage remuneration and solvency.

To test the hypotheses related to the economic performance (H1 and H2), the variables chosen were value added and the return on assets. Both measures are

**Table 2.** Distribution of sample firms by size.

	Non-EOF		EOF		Total	
	N	Per cent	N	Per cent	N	Per cent
Micro (0–9 employees)	319	83.1	320	93.3	639	87.9
Small (10–49 employees)	65	16.9	23	6.7	88	12.1
Total	384	100.0	343	100.0	727	100.0

**Table 3.** Distribution of sample firms according to their age.

	Non-EOF		EOF		Total	
	N	Per cent	N	Per cent	N	Per cent
Before 1990	19	4.9	1	0.3	20	2.8
1990–2000	189	49.2	81	23.6	270	37.1
After 2000	176	45.8	261	76.1	437	60.1
Total	384	100.0	343	100.0	727	100.0

commonly used to analyse the effects of employee ownership on performance (Richter & Schrader, 2017; Defourney et al., 1985).

To test Hypothesis 3 on the use of the labour factor, the most widely-used variable in the majority of the earlier studies is labour productivity, defined as the contribution of the workers to the obtaining of the final operating result. Finally, for Hypothesis 4, the capital factor, the measure used was long-term solvency.

All of these measures are accounting data which are widely used by managers, analysts and researchers because “they reflect a return more directly under the control of management and the workforce” (Richter & Schrader, 2017:5).

#### 4.2.2. Explanatory variables

The main variable representing employee share ownership takes the value 0 if it is non-EOF and 1 if it is EOF. Also included are control variables that have been shown to be significant in previous studies (Melgarejo, Arcelus & Simon, 2007b; Melgarejo, Arcelus & Simon, 2014; Espinosa Mendez, 2009; Wang, 2009), size, age and indebtedness measured in logarithm<sup>3</sup>. Furthermore, we included a dummy variable for sector of economic activity and also for each year a dichotomous variable which reflects the accumulated time effect for all the companies compared with the start of the period. (See Table 4)

The descriptive statistics indicate (Table 5) that, on the one hand, non-EOFs on average have a greater age, size, VA and solvency ratio, and on the other hand, EOFs on average have a greater ROA, debt coefficient and productivity.

If we analyse the correlation coefficients between the variables in Table 6, we can see that there is a significant positive correlation between the age and size with VA. In turn, VA is significantly negatively correlated with the variable that translates indebtedness and positively correlated with the ROA, solvency and productivity variables. In turn, indebtedness is significantly negatively correlated with the return on assets and financial solvency<sup>4</sup>. Last, ROA is significantly positively correlated with solvency.

We have also developed an exploratory analysis testing average differences between the two types of company. To do so, we have applied non parametrical tests



**Table 4.** Summary of the study variables.

Abbreviation of variable	Variables
VA	Log value added (Financial year result + Corporation tax + Personnel expenses + Depreciation charges + Financial expenses and similar)
ROA	Log return on assets (EBIT/Total assets)
Productivity	Log productivity variable (value added / personnel costs)
Solvency	Log solvency (Equity /Total liabilities)
PROP	Type of firm, dichotomous variable: EOF = 1 Non-EOF = 0
Size	Log Number of employees
Sector	Sector of economic activity Secondary = 0 Tertiary = 1
Age	Log number of years in operation
Indebtedness	Log debt coefficient.
Year 2010	Time effects. Dichotomous variable: year 2010 = 1 ; other year = 0
Year 2011	Time effects. Dichotomous variable: year 2011 = 1 ; other year = 0
Year 2012	Time effects. Dichotomous variable: year 2012 = 1 ; other year = 0

(U-Mann and Kruskal-Wallis). It can be seen, in [Table 7](#), that there are significant differences in the value added, productivity and solvency due to type of company.

### 4.3. Empirical data and analysis

The companies being compared 'have different capital-ownership structures and this could lead to differences in economic performance, which in turn could have an impact on the way they exploit the labour and capital factors of production' (Fernández-Guadano, 2014). To test the differences, we develop an explanatory analysis and create four models. Results of the random effects regressions are presented in [Table 8](#).

All models have a good fit as demonstrated by high Wald chi values. The results of Model 1 show ([Table 8](#)) that four variables, size, indebtedness, sector and capital ownership (which differentiate the EOFs and the non-EOFs) are significant in explaining value added. These results show that the different capital ownership structure does exert a significant influence on value added. This is a negative effect, or in other words, the fact that a company is an EOF decreases the value added. The size and age effect are also significant and positive, and in this case the larger the size and the age of a company the greater the value added. Debt has a significant negative effect, which means that the greater the financial risk the lower the value added. The temporary effect has been included, measured by the year variable. It can be seen that its influence is significant and increasingly negative, which can be attributed to the effects of the economic crisis.

The results of Model 2 show, in [Table 8](#), that the capital and debt ownership structure, as measured by the debt coefficient, has a significant negative effect on ROA and that the temporary effect variable (year) reflects a significant and negative variation in 2019 and 2012 as a consequence of the deterioration of the economic cycle.

It can be seen that capital ownership (which differentiates the EOFs and the non-EOFs), in Model 3, does not significantly influence productivity. Indebtedness is significant in explaining productivity. With regard to the time effects, a significant drop is only observed in 2011 compared with the initial reference year.

As can be seen in Model 4, different types of firm, EOF or non-EOF, do not significantly influence solvency, and neither do any of the control variables, except size



**Table 5.** Descriptive statistics for the sample.

	Non-EOF			EOF			Total		
	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev
Age	384	12.00	6.00	343	8.00	3.00	727	10.00	5.00
ROA	384	-5.9984	36.97	343	-5.35	21.44	727	-5.69	30.62
Indebtedness	384	81.63	67.69	343	85.49	57.58	727	83.45	63.11
Size	384	6.00	8.00	343	4.00	4.00	727	5.00	7.00
VA	384	189.95	266.10	343	111.18	150.28	727	152.79	222.58
Solvency Ratio	384	18.37	67.69	343	14.51	57.58	727	16.55	63.11
Productivity	384	0.83	8.51	343	1.02	0.79	727	0.92	6.21

**Table 6.** Correlation analysis.

	1	2	3	4	5	6	7
1 Age	1						
2 Size	.105**	1					
3 VA	.134**	.753**	1				
4 Indebtedness	-.068	-.066	-.175**	1			
5 ROA	-.037	.037	.163**	-.502**	1		
6 Solvency	.068	.066	.175**	-1.000**	.502**	1	
7 Productivity	-.019	.009	.080*	-.016	.058	.016	1

N = 727

\*\*Significance levels: 1%

\*Significant at 5%.

**Table 7.** Average differences in tests.

Prop	Value added	ROA	Productivity	Solvency ratio
U Mann-Whitney	53393.5	61522.5	60272.5	60290
W Wilcoxon	112389.5	120518.5	119268.5	119286
Z	-4.409	-1.533	-1.975	-1.969
Asymptotic sig. (bilateral)	.000*	0.125	0.048*	0.049*

a Grouping variable: prop

\*Significant at 5%.

that has a positive influence. The negative and significant time effect took place in 2012.

## 5. Results and discussion

### 5.1. Differences in economic performance

EOFs do not enhance company performance, all other factors remaining constant. The EOFs do not enjoy an advantage in economic performance for either measures considered in this study: VA and ROA. The results demonstrate that the capital ownership structure that differentiates the EOFs from the non-EOFs influences value added and ROA negatively, which is in contrast to the results found in some previous empirical studies (O'Boyle et al., 2016; Melgarejo, Arcelus & Simon, 2007b, Kruse & Blasi, 1995). In this study the value added variable has been used precisely to avoid the differences in economic performance attributed to these different types of firms that can be seen when comparing the profit for the financial year variable. Value added is an indicator of the operational or economic activity of the firm which does

**Table 8.** Results of random effects regressions.

	Model 1: VA	Model 2: ROA	Model 3: Productivity	Model 4: Solvency
Prop	-.075*** (.015)	-.004** (.005)	-.001 (.003)	-.005 (.008)
Size	.221*** (.012)	.003 (.003)	.008 (.002)	.011*** (.004)
Sector	-.034** (.016)	.0002 (.004)	-.001 (.002)	-.001 (.008)
Age	.049** (.018)	-.006 (.005)	-.003 (.002)	.007 (.009)
Debt	-.051*** (.010)	-.034*** (.012)	-.001*** (.002)	
Year				
2010	-.011** (.005)	-.003 (.002)	-.006 (.004)	.000 (.002)
2011	-.014** (.006)	-.007*** (.002)	-.001** (.005)	-.002 (.002)
2012	-.027** (.011)	-.022** (.009)	-.008 (.007)	-.023** (.011)
Cons	5.975	6.10	5.10	6.27
Wald $\chi^2$	523.62***	26.68***	29.62***	26.87***
N. obs	2908	2908	2908	2908
N. firms	727	727	727	727

Significance levels:

\* $p < 0.1$ ;\*\* $p < 0.05$ ;\*\*\* $p < 0.01$  T Based on robust standard errors, in parenthesis.

not take into account personnel costs that, in the case of EOFs, can skew results due to their dual partner-employee status (Fernández-Guadano & López-Millán, 2018). These results may be due to a variety of reasons which have been addressed in the literature and which recognise that higher levels of ESO, as occurs in the case of Spanish EOFs, may induce inefficiencies that limit its positive effects on company performance or even reduce them as they may bear the costs of collective decision-making (Richter & Schrader, 2017) or may also weaken the incentives for outside monitoring and control such as economic surplus for non-employee shareholders (Jensen & Meckling, 1979). Some analyses even suggest that “workers may be relatively risk-averse leading to limited reinvestment, low capital-labour ratios and poor economic performance” (Defourney et al., 1985: 200).

Furthermore, according to Kim & Patel (2017) and Caramelli & Briole (2007), differences in institutional context across countries could explain variations in the influence of employee ownership on performance.

In terms of previous findings, Kruse & Blasi (1995) concluded that the key findings that emerge from performance studies are that there is no automatic connection between employee ownership and firm productivity or profitability. The empirical evidence remains mixed.

## 5.2. Differences in productivity

These results are consistent with some previous findings (Fernández-Guadano, 2014; Richter & Schrader, 2017), but not with the most widespread theoretical ideas in the literature which consider that this is the variable that determines the main differences

between the two types of firm. This is due to the dual status of the partner-employee which makes employees more involved in the firm and this in turn is supposed to result in improved productivity, competitiveness and job quality. Thus, according to various reports from the (European Commission 2002, Fajardo-García et al., 2016), employee owned firms are characterised by generating more stable links between the employee and the firm, by reducing employee turnover and by increasing job stability and motivation. This study does not allow us to verify these effects (see Table 8).

### 5.3. Differences in solvency

The results show that the different capital ownership structure, which differentiates the EOF from the non-EOF, does not explain the differences in solvency that have been found between the two types of firms (see Tables 7 and 8).

These results support theorists predicting a lack of motivation in EOFs to finance capital using their own funds (horizon problem) due to the dual role of partner and employee in the same person (Fernández-Guadano, 2015). EOFs may have problems in accumulating capital above all if we take into account the legal restrictions (Law 44/2015) on increasing own funds such as limitations on attracting the capital of capitalist partners; limitations on the free trading of securities; a lack of an organised market; and greater profit retentions than for non-EOFs, with the obligation to create a special reserve which may only be used to offset losses and/or for the acquisition of own shares. These restrictions imposed by Spanish legislation may have contributed to the worse results of the EOFs both in terms of solvency and in terms of profitability. According to Dow (2018) a market for EOF membership would have eliminated the horizon problem. But this is difficult in the Spanish case.

## 6. Conclusions

The intention of this research is to support the Spanish model represented by EOFs as a tool for the promotion of employee ownership and participation. The Spanish EOF is a Social Economy business model characterised by employees holding the majority of the three types of flow in any business: information and decision-making flows, financial flows and production flows. The regulation of this Spanish model, unique in the European Union, gives us our comparison with conventional capitalist firms. Therefore, these are special firms that meet the Spanish legal requirements for employee ownership designation. According to Lowitzsch et al., (2017) EOFs in Spain are based on employee ownership whose demonstrated benefits complement the policy aims of Active Labour Market Policies. They found that could easily be employed in the other 27 EU Member States as a best practice model because there are no legal obstacles to the adoption of this concept across the EU.

There are several different Community initiatives promoting financial participation of employees in their firms' capital as a way to improve the firm's performance and thus make it more competitive. For this reason, this paper analyses the extent to which differences in VA, ROA, productivity and solvency between employee-owned firms (EOFs) and non-EOFs can be attributed to their different capital-ownership structures.

As a result, four models were proposed using these variables, which are considered in the economic literature to give rise to the main differences attributed to the different capital ownership structures, adding size, age, sector and indebtedness as control variables. The difference in the capital ownership structure between the two types of firms has allowed to explain the value added (Model 1) and ROA (Model 2) but has not been a determining factor in explaining productivity (Model 3) and financial solvency (Model 4). The results of Model 1 show that value added is influenced by the different capital ownership structure, by size and by indebtedness. If we consider that as a measure of performance the variable VA neutralises the effects of a possible anticipation of profits, which is a policy very frequently used in employee-owned firms to avoid the double taxation of profits, then the negative relationship between this and the EOFs shows that employee share ownership does not contribute to the better economic performance noted in previous studies. Admittedly there is no unanimity in the scientific community about its effects, but this result highlights the fact that during this period of crisis, EOFs in Spain have responded worse to the shock than non-EOFs. We agree with some authors that not only the economic but also the institutional context, such as the strict regulatory framework, may have restricted the performance of the EOFs. Productivity, despite having a higher value on average in the EOFs than in the non-EOFs and the fact that this difference is significant, but is not influenced by the different ownership structure of the firms being compared, as shown by the results of Model 3. The results, in Model 4, show that the different capital ownership structure does not explain the differences in solvency, despite constant concern in the economic literature about the low provision for the reserves in EOFs which leads to low solvency values.

This study serves to add a further conflicting result to the literature on employee ownership and company performance.

Future analysis could be enriched if additional explanatory variables were introduced in the models and also by increasing the number of years and including a new period that is not affected by the economic crisis whose negative effects have been demonstrated in this study. Moreover, unlike non-EOFs, EOFs also need to be analysed by looking at other social indicators to adequately assess their performance. There is a growing view that financial performance measures per se are inadequate for strategic decision making. Qualitative data could add value by providing new insights. Caution is required in the interpretation of these results because two limitations should be considered, on the one hand, the coarse measure of employee ownership, on the other hand, the results can only be applied to firms that are structured similar to that provided by the Spanish law or those of similar type in other countries.

In terms of policy implications, measures should be considered such as fiscal incentives to make it easier for workers to access the property and retain earnings to finance future investments. In order to enhance the performance of EOFs, the government could implement a number of measures such as modifying the limits imposed with regard to the hiring of workers who are not partners and permitting a more flexible use of the special reserve, both of which could affect business performance without the company losing its legal status or its special protection.

## Notes

1. There are also exceptions to these requirements such as the chance to set up employee-owned firms with two partners, as long as both are employees and they hold equal shares in the company.
2. National Classification of Economic Activities assigns a code to each economic activity. Generally this code (which is usually five digits) is used in many forms both official and at company level. Available in: <https://www.cnae.com.es/index.php>. The primary sector has not been considered due to the small number of observations
3. All the variables that give negative results have been transformed to be able to calculate the logarithm by adding their minimum value.
4. Note that Model 4 (dependent variable Solvency) does not include the independent variable Debt.

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